

ABSTRACT

An implicit function field of a nonmanifold is held in a form of volume data; a value of an implicit function at
5 a point between lattice points is decided by interpolation;
and if a difference in code distances between two adjacent
voxels to be interpolated is larger than a fixed width, no
surface is formed between the voxels. Furthermore, an
entered curved surface is broken down into curved surface
10 patches which enable determination of a front and a back;
numbers are given to the front and the back, respectively, to
be distinguished from each other; and a space is classified
into a plurality of regions by using the number of a surface
of a nearest point.